NC/QC/YD/2020-21/P5-C1 Date: 28-09-2020

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04 of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	156 min	Shall not be less than 30 min
2	Final setting time	265 min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	2.15%	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	2.08 mm	Shall not be more than 10 mm
5	Compressive strength a) 3 days (average of three results)	28.64 N/Sq mm	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.

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NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/P5-C2 Date: 30-09-2020

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	162 min	Shall not be less than 30 min
2	Final setting time	275 min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	2.12%	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	2.06 mm	Shall not be more than 10 mm
5	Compressive strength b) 3 days (average of three results)	28.74 N/Sq mm	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.

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NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/P5-C3 Date: 03-10-2020

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no 04 of Yelahanka New town sub Division(Package -05).}
Ref. Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	161 min	Shall not be less than 30 min
2	Final setting time	285 min	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	2.17 %	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	2.09 mm	Shall not be more than 10 mm
5	Compressive strength c) 3 days (average of three results)	28.86 N/Sq mm	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.

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NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/P5-C5 **Date: 07-10-2020**

1. TEST REPORT ON CEMENT:

Sub: Testing of 53 Grade Cement Sample (IS 12269-1987).
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04 of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

PHYSICAL TESTS ON CEMENT

Grade * : 53,
Type * : O.P.C

TABLE 1.1:

SL No	Name of Test	Test Results	Requirements as per IS 8112-1989
1	Initial setting time	**165 min**	Shall not be less than 30 min
2	Final setting time	**270 min**	Shall not be more than 600 min
3	Fineness (by dry sieving on IS 90 micron sieve)	**2.18 %**	Not to exceed 10.0%
4	Soundness test(by Le-Chatelier's method)	**2.03 mm**	Shall not be more than 10 mm
5	Compressive strength e) 3 days (average of three results)	**28.46 N/Sq mm**	Shall not be less than 27 N/Sqmm

The result of the materials tested meets the standards and hence can be used for the work.

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NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/P5-CB1 **Date: 19-10-2020**

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	12-10-20	19-10-20	07	22500	365	16.22	16.30
	002	"	"	"	"	360	16.00	
	003	"	"	"	"	375	16.67	

The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT * Bangalore *

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EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/P5-CB5 Date: 26-10-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 07days Compressive Strength).
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04 of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	19-10-20	26-10-20	07	22500	380	16.89	16.81
	002	"	"	"	"	370	16.44	
	003	"	"	"	"	385	17.11	

The result of the materials tested meets the standards and hence can be used for the work.

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NEWZEN CONSULTANT * Bangalore *

NC/QC/YD/2020-21/P5-CB2A

Date: 11-11-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no 04.of Yelahanka New town sub Division(Package -05).}

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	14-10-20	11-11-20	28	22500	510	22.67	23.04
	002	"	"	"	"	525	23.33	
	003	"	"	"	"	520	23.11	

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P5-CB6A

Date: 17-11-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	20-10-20	17-11-20	28	22500	525	23.33	22.96
	002	"	"	"	"	515	22.89	
	003	"	"	"	"	510	22.67	

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P5-CB8A Date: 19-11-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04 of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm
Grade of Concrete* : M_{20}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	22-10-20	19-11-20	28	22500	510	22.67	22.37
	002	"	"	"	"	495	22.00	
	003	"	"	"	"	505	22.44	

The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT * Bangalore *

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NC/QC/YD/2020-21/P5-CR2A

Date: 18-11-2020

1. TEST REPORT ON CEMENT CONCRETE CUBES:

Sub: Testing of Concrete Cubes (for 28days Compressive Strength).

{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}

Ref.: Material testing/PMC/20-21,

Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.

Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

RESULTS OF COMPRESSIVE STRENGTH ON CEMENT CONCRETE

CUBE SPECIMENS

Dimensions of Specimen : 150 X 150 X 150mm

Grade of Concrete* : M_{30}

TABLE 1.1:

Sl No	Location/ Identification*	Date of Casting*	Date of Testing	Age in Days	C/S Area in mm^2	Maximum Load in K.N	Compressive Strength (N/mm^2)	Avg. Value
1	001	21-10-20	18-11-20	28	22500	730	32.44	32.81
	002	"	"	"	"	745	33.11	
	003	"	"	"	"	740	32.89	

The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT * Bangalore *

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EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/P5-W1 Date: 05-11-2020

TEST REPORT ON WET MIX MACADAM MIX
(GRADATION TEST)

Sub: To conduct Gradation test on Wet Mix Macadam (WMM) Mix.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

1. Gradation Test:
TABLE 1.1

Sieve Size mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Specified Limits as per MoRTH Specifications, V Revision-2013
53.00	100.00	100
45.00	97.35	95-100
26.50	---	-
22.40	74.25	60-80
11.20	52.45	40-60
4.75	34.90	25-40
2.36	22.50	15-30
0.600	18.05	8-22
0.075	3.90	0-5

The result of the materials tested meets the standards and hence can be used for the work.

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NEWZEN CONSULTANT * Bangalore *

Date: 12-11-2020

TABLE 1.2

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS 383-1970 & M.o.R.T.H Specification, V Revision -2013.
1.	Aggregate Impact Value	**26.94%**	Not more than 30.00 %
2.	Combined Flakiness and Elongation index, %	**28.16%**	Not more than 35.0 %
3.	Water absorption, %	**0.43%**	Not more than 2.0 %
4.	Plasticity Index, %	**NP**	Not more than 6.0 %

The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT BANGALORE

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EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/P5-DBM1 Date: 04-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for DBM mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

A. Type of Construction : **Dense Graded Bituminous Macadam.**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **4.52 %**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-10 of MORTH Specfications-2013 DBM (Grading - 2)
37.5	100	100
26.5	97.25	90-100
19.0	83.60	71-95
13.20	71.35	56-80
4.75	48.70	38-54
2.36	36.05	28-42
0.300	18.90	7-21
0.075	7.40	2-8

. The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT * Bangalore *

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EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/P5-DS2 Date: 04-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for DBM mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

Table 1: Properties of DBM (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Dense Bituminous Macadam, Grade-2 as per M.o.R.T&H (IV Revision)-2001 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1256	900
2	Marshall Flow at 60°C, mm.	3.42	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT * Bangalore *

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EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/P5-CB1 Date: 03-12-2020

1. TEST REPORT ON COARSE AGGREGATE:

Sub: Testing of Coarse Aggregate used in Bituminous Concrete.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04 of Yelahanka New town sub Division(Package -05).}
Ref. Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TABLE 1.1 ;

SL No	Test conducted	Test Results	Tests Conforms to IS 2386(Part I to IV)– 1963 (Reaffirmed on 2002) & Requirements as per IS 383-1970 & M o R.T H Specification, V Revision -2013.
1.	Aggregate Impact Value	**22.86%**	Not more than 24.00 %
2.	Combined Flakiness and Elongation index, %	**27.56%**	Not more than 35.0 %
3.	Water absorption, %	**0.42%**	Not more than 2.0 %
4.	Specific gravity	**2.62**	-------
5.	Soundness	**5.74%**	Max. 12 % in Sodium Sulphate

. The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT Bangalore

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EMAIL:newzen576@gmail.com

NC/QC/YD/2020-21/P5-BC3 Date: 09-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref. Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Construtıon Company).

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.41%**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	100	100
13.2	97.25	90-100
9.5	83.10	70-88
4.75	66.35	53-71
2.36	51.80	42-58
1.18	44.35	34-48
0.600	32.75	26-38
0.300	24.90	18-28
0.150	16.10	12-20
0.075	8.35	4-10

The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT * Bangalore *

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NC/QC/YD/2020-21/P5-BS4 Date: 11-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	**1368**	900
2	Marshall Flow at 60°C, mm.	**3.54**	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.

NEWZEN CONSULTANT * Bangalore *

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NC/QC/YD/2020-21/P5-BS6

Date: 14-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1346	900
2	Marshall Flow at 60°C, mm.	3.34	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P5-BC7

Date: 14-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company)

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.43%**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	100	100
13.2	96.25	90-100
9.5	81.15	70-88
4.75	65.35	53-71
2.36	52.80	42-58
1.18	41.35	34-48
0.600	34.75	26-38
0.300	21.65	18-28
0.150	18.40	12-20
0.075	7.30	4-10

. The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P5-BS7

Date: 14-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04 of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1348	900
2	Marshall Flow at 60°C, mm.	3.36	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P5-BC8 Date: 16-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(BITUMEN EXTRACTION TEST & GRADATION TEST)

Sub: To determine the percentage of bitumen and gradation for BC mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no 04 of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

A. Type of Construction : **Bituminous Concrete**
1. The bitumen content obtained after subjecting the sample for Bitumen Extraction test = **5.42%**

2. **Gradation Test**
TABLE 1.1

Sieve Size, mm	Percent by Weight passing the Sieve from the sample supplied (Obtained Gradation)	Gradation requirement as per Table 500-17 of MORTH Specfications-2013 BC (Grading - 2)
19.0	100	100
13.2	94.25	90-100
9.5	81.90	70-88
4.75	63.45	53-71
2.36	52.75	42-58
1.18	46.30	34-48
0.600	33.85	26-38
0.300	25.10	18-28
0.150	16.90	12-20
0.075	7.25	4-10

. The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P5-BS8

Date: 16-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no 04 of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1368	900
2	Marshall Flow at 60°C, mm.	3.54	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.

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NC/QC/YD/2020-21/P5-BS10 Date: 17-12-2020

1.TEST REPORT ON BITUMINOUS MIXES :
(STABILITY OF BITUMINOUS MIX)

Sub: To determine the stability of bituminous mix for BC mix sample.
{Project*: Improvements to roads & drains at Judicial Layout, Someshwaranagara, Chikkabommasandra and Allalasandra and surrounding areas in ward no.04.of Yelahanka New town sub Division(Package -05).}
Ref.: Material testing/PMC/20-21,
Report Required for: Assistant Executive Engineer,
Yelahanka Satellite Town Sub Division,
BBMP, Bangalore.
Name of the Agency/Contractor*: M.S. Venkatesh (MSV Constrution Company).

TEST RESULTS

Table 1: Properties of BC (Gr-2) Mix

Sl. No.	Test Property	*Test results obtained by Marshall method	Requirements of Bituminous Concrete, Grade-2 as per M.o.R.T&H (V Revision)-2013 Specifications
1	Marshall Stability (75 blows) (At 60°C), kgs.	1356	900
2	Marshall Flow at 60°C, mm.	3.44	2.0 - 4.0

The result of the materials tested meets the standards and hence can be used for the work.

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